

# THE EXPERIENCE OF REAL WORLD CONTEXTS IN VIRTUAL ENVIRONMENTS: NEGOTIATING MEANING IN ADULT ONLINE LEARNING

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## Abstract

The purpose of this qualitative case study was to develop a deeper understanding of adult learners' experiences participating in an online, problem-based course, and to enhance our understanding of PBL as a means to foster a sense of context in these environments. The findings the perception of meaningful context, is constantly mediated through differences among group members, and the need to manage group and interpersonal processes, particularly around unresolved issues of authority and intimacy. Implications for adult educators are discussed.

## Introduction

Within a short period of time, online learning has become a significant component of postsecondary education. In 2002, it is projected that eight-five percent of higher education institutions will offer courses online (Distance Learning May Soar, 1999 as cited by West, 1999). While this "revolution" has spread across all sectors of postsecondary education, efforts at developing and enhancing online programs seem targeted primarily to adults, the fastest growing student segment within postsecondary education. For profit institutions such as Phoenix University are offering online degrees tailored for working adults (West, 1999). To remain competitive in the adult market, traditional colleges and universities are rapidly expanding distance education offerings.

Despite its rapid growth, however, online programs have faced significant challenges in attempting to serve these adult learners. Early online course offerings often resembled electronic versions of old correspondence programs, transmitting information to large numbers of learners (Boshier et. al., 1997), and many current efforts are not much better. Focusing primarily on transmitting online leaves adult learners feeling isolated and unmotivated, leading to procrastination and eventually attrition (Garland, 1993). Learners are largely left to themselves to make connections and applications to specific contexts. Attempts to promote more interaction among online learners through asynchronous communication failed to provide more contextual learning environments or to address learners' feelings of detachment and isolation, and may even be furthering a lack of connection among adult participants (Bullen, 1998).

To be effective, adult learning must be contextually relevant, problem-based, and perceived as applicable to the learner's current situation (Merriam & Caffarella, 1999). For adults, learning settings should reflect real-world contexts. In contextual learning, the learning process is tightly bound or inseparable from the context or situation in which learning occurs. Both the process of learning and the knowledge attained are "a product of the activity, context and culture in which it is developed and used"(Brown et.al., 1989, p. 32). When content is learned within contexts meaningful and relevant to the learners, their motivation, interest, and achievement improves dramatically (Hansman, 2001). Such connections and integrations foster a deeper sense of meaning among learners and help them see how particular content relates to their own lives.

Integrating content with real world contexts continues to be problematic in online environments. The challenge is further exacerbated by the virtual nature of online learning. Spontaneity and the ability to discern and respond to emerging contextual issues are important to effective experiences in contextual learning. Within online environments, more structured and planned communication usually circumscribes spontaneity. Furthermore, the usual cues that allow participants to assess the kind of understanding that derives from learners' making connections between the content and their life experiences are often absent.

Contextual learning is enhanced by structuring curricula around problems that characterize real-world contexts. Solving ill-structured problems are at the heart of professional practice (Jonassen, 1999). They are ambiguous and uncertain, and it is unclear just what the nature of the solution should be. Problem-based learning (PBL), which incorporates ill-structured problems into the curriculum, represents a promising approach to developing real-world contexts. Numerous professional preparation programs have adopted PBL as a curricular model for their programs (Koschmann et.al., 1996). A PBL curriculum assumes that students, in small groups, develop content knowledge and skill by ill-structured problem resolution. In such an approach, teachers rarely direct instruction; they act as a facilitator, tutor or guide for group inquiry. Students have freedom to pool their experiences to make meaningful connections with the text through problem-solving in their groups. Given its focus on real-world practice problems and the need for learners to work together to address these problems (Boud & Feletti, 1997; Bridges & Hallnger, 1995), PBL seems well-suited to the experience of real-world contexts in virtual environments.

Relatively few studies, however, have reported the use of PBL online and, for the most part, these studies do not address the students' experience of context in these settings. Some research suggests concerns with the ways in which problems are construed and approached. In some instances, online learners receive information about how to solve problems but too seldom engage in problems such as those they will encounter in real practice (Jonassen et al, 1999). Other researchers have found that the problems may not be ill-structured, which results in the students failure to attain the knowledge and skills they need to solve problems in their professional careers (Koschmann et. al., 1996). Group work is often dominated by learners with more advanced skills, thereby depriving others of the opportunity to develop problem-solving skills (e.g. Kitchen & McDougall, 1999; Oliver & Omari, 2001). Other studies report findings of students' efforts at problem solving, but fail to demonstrate the nature of the problems presented to the students (Cohen, 1994; Sage, 2001). Researchers have also explored the PBL process in online environments as they examined the overall effectiveness of the approach (Cohen, 1994), the student's approach to learning within a PBL curriculum (Newbie & Clark, 1986), the outcome of problem-solving strategies, and instructors' and students' overall evaluations of the PBL course design (Oliver & Omari, 2001). For the most part, these studies have been evaluations of course designs rather than studies to understand the contextual nature of the environment.

We know relatively little about participants' actions and decisions behind their experiences as they struggle to learn in problem-based, online environments. The purpose of this study was to develop a deeper understanding of adult learners' experiences participating in an online, problem-based course, and to enhance our understanding of PBL as a means to foster a sense of context in these environments. The question that guides our inquiry is "What is the nature of the students' experience of in a PBL online environment in which ill-structured problems are used to provide a practical context?"

### Research Design and Data Analysis

We utilized a case study qualitative research design. The case is an online course on adult learning at a large, Midwestern research university. The twenty-five participants were graduate students, most of which were enrolled in a program in higher and adult education. The participants included four African American female (one doctoral, three masters); one African American male (masters student); three International masters students; one Hispanic female doctoral student; nine White females (four doctoral, five masters); eight White males (three doctoral, five masters). This class was the first online experience for 75% of the respondents.

Traditionally taught in FTF contexts, the course was redesigned to be taught online and in a problem-based format. The problems used in this course were designed as both ill-structured and related to the real world of professional practice. For example, the first problem involved attrition in developmental education courses in community colleges. Using the research and theory in adult learning, the students were to address the attrition problem and to create an action plan for the college administration designed to reduce the number of students withdrawing from these

classes. A similar approach was used for two additional problems, focusing on learning in professional practice and learning to work across differences in a collaborative setting. Participants were assigned by the instructor to small groups of three to four students, with the intent of creating heterogeneous groups. The groups stayed intact for the entire semester. Each problem was addressed and studied by the small group, and each small group was expected to collaboratively complete a product. In addition, individual group members produced reflection papers for each problem, as well as maintained personal journals for the entire course. Data were collected from background questionnaires, in-depth interviews, and course archival records. The interviews were transcribed verbatim.

## Findings and Discussion

Most students reported enthusiasm about starting this course, remarking that it would enable them to complete a course without the need to come onto campus and to learn adult learning theory. It provided them an opportunity to take a course offered by the instructor and to experience an online course, which they felt was important because of its growing significance in adult and higher education. As the course unfolded, some students continued to feel excited about the environment. For others, this enthusiasm quickly turned to trepidation. The findings suggest that the learners' experiences of context in an online PBL environment is mediated by a) the process of connecting problems and relating content to their own practice settings, and b) management of group and interpersonal dynamics that characterized team processes.

*Connecting content to practice.* The students' ability to make meaningful connections was influenced by the problems, group discussions and the technology. For some students such as Anne, the problem-based approach was a welcome change. She commented, "I like the problem-based learning because I think that people can learn in a textbook but can you pull that knowledge and use it out of textbook? Somebody can be a wonderful student but can they apply it? I think problem based learning is applying the knowledge." Nard found that the third problem was so relevant to her job that she submitted her group's final product to her dean for use in their college. Students like Donald felt that they needed the instructor to provide a lecture in order to make those connections. He remarked, "Maybe if I had lecture notes in front of me and the teacher talking ...I think that would help me."

Group discussions led to making connections with prior experience. In a conversation between two group members on the need for teachers to try different teaching strategies to relieve teacher burnout, Lisa commented, "I have seen this happen time and time again." Autumn said, "I tried doing that in my class as well." Some connections evoked empathy with other adult learners. For example, when returning to his computer after stepping away for a moment Xavier explained, "My little girl was asking for some juice. I think that really explains how adult learners have to deal with personal responsibilities while trying to study." Yet, for those like Chris the connections were less clear: "I don't have an education background so the problems are confusing to me."

Technology helped connected content to practice. Some students like Nard used the technology to search for additional sources on the Internet: "I found some useful sites on the Internet that explains this issue better than the texts." For others like Ginger, who identified themselves as more oral learners, the medium of the technology presented a limitation for learning: "I'm an oral learner... When I hear things I remember it. I read things, it goes in one eye out the other."

*Managing group and Interpersonal dynamics.* Participants found the process both challenging and problematic, due to group and interpersonal issues as well as the technology. Ginger's experiences were very positive: "I don't think I would have learned as much [on my own]...We start out very quietly and look at everything that possibly could be influencing the problem and what could be an issue...[I] have learned a lot more from the things that we've looked at than actual solving the problem." Donald felt that he learned a lot from his group. However, he felt that he missed a lot by not interacting more with other member of the class: "I don't necessarily benefit from what these other people are thinking." India's experience was a nightmare, "It's hard

to know where everybody is coming from, even though we are discussing the issues...My take on it is different from another group member, who is different from another group member."

Differences in their learning styles, race, gender, and culture influenced their experiences. India commented on the diverse academic challenges: "Everybody comes to the group with their different individual learning styles...Jane having a tough time because she's a single parent and Bill...[who]...didn't know what to do after undergrad so he thought he would take the master's program...India here, who is a 4.0 student and really loves to learn...Jill, who is in the workplace and...really want a better job." Racial, gender and cultural issues were also prevalent. Janice felt excluded because of her race: "Both of my group members were white and I am not...[I was] beginning to feel like exclusion." Her group members confirmed that she may have felt "pushed out." Cynthia, the only female in her group comments, "I noticed that Walden would constantly cut me off while I was talking to insert his opinion."

For most students the technology further complicated the interpersonal and group dynamics. Chris said, "The technology is great but...I was scheduled to chat and couldn't get online at all." Communicating within the online environment was frustrating and time consuming. Ginger comments, "It's just more time consuming to arrange times to be in the chat." When this group met face to face however, Ginger reflected, "Our communication...flowed a little better when you are in a room together and we could show them the piece of paper that we were talking about... but it takes forever to type out the entire thought that you were saying rather than if you can see visual, usually when somebody is finished talking."

*Implications for research and practice.* Despite their differences, all of the students persisted and each student concluded that they learned a great deal about both adult learning theory as well as themselves as adult learners and group members. The students' stories highlight both the successes and the challenges educators face in creating meaningful contextualized learning for adult learners online. Similar to other face-to-face PBL approaches (Koschmann et.al, 1998); their processes were characterized by an ongoing need to make sense of the problem in light of their own individual and collective practice experiences. This sense-making process was marked by an almost continuous process of negotiation. They negotiated their understandings of the problems with which they were confronted, possible resolutions to the problem, and the relationship between the course content and the problem resolution. Furthermore, the students spent considerable time and effort negotiating differences among themselves as they approached and discussed the problems. These differences reflected the influence of learning styles, life contexts, culture, and academic status on their perception and experience of the given problems. Similar to other studies (McGrath & Berdahl 1998; McConnell, 2000), the technical environment created the need to constantly negotiate meeting times and schedules. Finally, most learners perceived the need to negotiate their online presence, such as when to talk, how much to say and the effects of their comments on their group members. The problem of defining their sense of presence online was compounded by a lack of physical contact, as well as interacting virtually in a text-based environment.

While these differences significantly influenced the way individuals and groups approached the problems, they also contributed to the overall meaning and perceived authenticity of the problems being addressed. While maximizing differences is a desirable aspect of PBL, it is clear from our study that individual differences significantly influence the way problems are perceived as real-life contexts. The degree to which the problems were perceived as authentic and meaningful appears to be significantly influenced by prior experiences, academic preparation, and other life contexts. Although individual differences contributed to varying experiences of meaningfulness of the problems, the group heterogeneity significantly influenced the learning experiences of the students along race, cultural, gender, academic standing, and learning styles. The PBL environment fostered a deeper learning among the participants around these factors. For example, there was growing awareness that female members were constantly interrupted by male members, reinforcing the perception of others of gender issues in small group settings (Berdahl & Craig, 1996). Some female members took on nurturing roles for male group members

who were not fully participating. African American and International students reported feeling excluded because of race and language issues.

It is clear from the findings that the learning process as well as the knowledge attained by the learners was situated or tightly bound up with and inseparable from the problems presented the processes of the small heterogeneous groups, and the online environment. This conclusion is consistent with the research and theory on situated cognition, which demonstrates that the learning process and the knowledge attained are “a product of the activity, context and culture in which it is developed and used” (Brown et. al., 1989, p. 32). The findings also suggest consistency with research on the dynamics and process of small, face-to-face groups. Two issues seemed to emerge as critical to the overall effectiveness of these groups, that of authority and intimacy (Bennis & Shepard 1974; Smith & Berg, 1997; Wheelan, 1984). For example, several groups spent time lamenting over the lack of instructor lectures to provide a content foundation, reflecting unconscious flight strategies to elicit attention from the teacher (Bennis & Shepard, 1974) and reflecting a continuous struggle with issues of authority (Smith & Berg, (1997).

In addition, several groups seem to struggle with coming together at all, suggesting concerns for intimacy. One group failed to ever meet together as a group. Thorough and comprehensive discussions of the problems were often avoided, opting instead for a division of labor approach, which obviated the need to meet and discuss. This process, however, resulted in three separate papers that, at the last minute, needed to be combined into one. Smith & Berg (1997) explain that as group members negotiate their personal identity with their newly formed group identity, the newly formed group is struggling to form an identity by pulling its members to deeper levels of commitment toward a group identity. This creates a paradoxical tension full of emotion and stress for the group members. Addressing the problem of intimacy was also influenced by the judgments group members made of each other based on race, gender, culture, academic status and learning styles. Wheelan (1984) explains that groups make quick judgments about the individual member's ability to contribute to the group in ways that mirror hierarchical structures within the larger society. That is, those students higher on the hierarchical ladder – White males, doctoral students, and older students – will quickly judge students who are different from the dominate group members as more or less capable according to this hierarchical ladder. This behavior serves to privilege White males while creating unfriendly conditions for persons of color and women. White males are privileged even when they are the only male in the group, because the females will follow the traditional female role within the group when men are present (Berdahl & Craig, 1996). As Bennis and Shepard (1974) suggest, unresolved issues around authority and intimacy can significantly compromise a group's ability to produce meaningful work.

### Conclusion

In summary, this case study demonstrates that real-world contexts are possible within virtual environments. The findings further suggest that what participants learned in this experience is fully consistent with research and theory on contextual learning and situated cognition. The perception of meaningful context, however, is constantly mediated through differences among group members, and the need to manage group and interpersonal processes, particularly around unresolved issues of authority and intimacy. The findings further suggest that practitioners need to attend more fully to the importance of negotiation of difference within these environments, and to the need to develop knowledge and skill among group members around the importance of the issues of authority and intimacy in the learning process.

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